

Applicants: Philip O. Livingston et al.
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Listing of the Claims:

1. (Currently Amended) A composition which comprises:
 - (a) a conjugate of i) a derivative of a fucosyl GM1 ganglioside which comprises a converted ceramide portion, which differs from the a ceramide portion of the fucosyl GM1 ganglioside solely by having an aldehyde group in place of a double bond, and ii) Keyhole Limpet Hemocyanin, wherein the derivative of fucosyl GM1 ganglioside is covalently conjugated to Keyhole Limpet Hemocyanin by a covalent bond between an amino group of Keyhole Limpet Hemocyanin and the aldehyde group of the converted ceramide portion of the fucosyl GM1 ganglioside;
 - (b) QS-21; and
 - (c) a pharmaceutically acceptable carrier, wherein ~~the fucosyl GM1 ganglioside derivative-Keyhole Limpet Hemocyanin molar ratio in the conjugate is from 400:1 to 1400:1, and the~~ conjugate and QS-21 are each present in the composition in an amount effective to stimulate or enhance antibody production in a subject and the composition is lyophilized.
- 2.-5. (Canceled)
6. (Previously Presented) The composition of claim 1, wherein the amount of the conjugate is between

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about 3 μ g and about 100 μ g.

7. (Previously Presented) The composition of claim 1, wherein the amount of QS-21 is between about 30 μ g and about 100 μ g.

8. (Previously Presented) The composition of claim 1, wherein the subject is a human.

9.-10. (Canceled)

11. (Currently Amended) A method of enhancing antibody production in a subject which comprises administering to the subject an effective antibody producing amount of a composition comprising:

(a) a conjugate of i) a derivative of a fucosyl GM1 ganglioside which comprises a converted ceramide portion, which differs from the a ceramide portion of the fucosyl GM1 ganglioside solely by having an aldehyde group in place of a double bond, and ii) Keyhole Limpet Hemocyanin, wherein the derivative of fucosyl GM1 ganglioside is covalently conjugated to Keyhole Limpet Hemocyanin by a covalent bond between an amino group of Keyhole Limpet Hemocyanin and the aldehyde group of the converted ceramide portion of the fucosyl GM1 ganglioside;

(b) QS-21; and

(c) a pharmaceutically acceptable carrier,

wherein ~~the fucosyl GM1 ganglioside~~

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~~derivative-Keyhole Limpet Hemocyanin molar ratio~~
~~in the conjugate is from 400:1 to 1400:1, and the~~
conjugate and QS-21 are each present in the
composition in an amount effective to stimulate or
enhance antibody production in a subject and the
composition is lyophilized.

12.-13. (Cancelled)

14. (Currently Amended) A method of treating a small
cell lung cancer in a subject which comprises
administering to the subject an effective small
cell lung cancer treating amount of a composition
comprising:

- (a) a conjugate of i) a derivative of a fucosyl
GM1 ganglioside which comprises a converted
ceramide portion, which differs from the a
ceramide portion of the fucosyl GM1
ganglioside solely by having an aldehyde
group in place of a double bond, and ii)
Keyhole Limpet Hemocyanin, wherein the
derivative of fucosyl GM1 ganglioside is
covalently conjugated to Keyhole Limpet
Hemocyanin by a covalent bond between an
amino group of Keyhole Limpet Hemocyanin and
the aldehyde group of the converted ceramide
portion of the fucosyl GM1 ganglioside;
- (b) QS-21; and
- (c) a pharmaceutically acceptable carrier,
wherein ~~the fucosyl GM1 ganglioside~~
~~derivative-Keyhole Limpet Hemocyanin molar ratio~~
~~in the conjugate is from 400:1 to 1400:1, and the~~

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conjugate and QS-21 are each present in the composition in an amount effective to treat the small cell lung cancer in the subject and the composition is lyophilized.

15.-16. (Canceled)